

# Student Owned Devices

*Transforming education  
and learning*

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## Student Owned Devices

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### Executive Summary

In many ways, the power and flexibility of mobile technology are transforming both education and learning. This document gives rationale for the use of student owned devices, Red Deer Catholic's history and present perspective. If moving in the direction of student owned devices, what guiding questions would assist administrators and what resources do we have available to assist us on our journey?



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### Introduction and Rationale

Students see smart phones as a potential learning tool. Mobile learning has clearly become a significant new direction for improving student education at all levels. A mobile device is part of a student's lifestyle and combines many technologies to engage them and help them learn effectively. In many ways, the power and flexibility of mobile technology are transforming both instruction and learning.



#### *The Case for Mobile Learning*

Why is it necessary for Red Deer Catholic to join the mobile learning movement? Consider these factors:

- Mobile devices are now central to the way students communicate and engage in all aspects of their lives. The Pew Internet Project found that 49 percent of Americans ages 18-24 own a smartphone, and that the majority of these young adults also own a laptop computer.
- Today's student expectations are changing. They juggle a complex life of school, family, socializing, and work. As a result, they would like to learn and to complete assignments at the time, pace and place that is most convenient for them.
- Unlike the traditional activities of completing all the odd questions on a particular math textbook page or reading an assignment then writing a paper, students are hopeful that learning to be more interactive, collaborative and engaging. Because of students' use of technology outside the classroom, the student learning styles are changing. Parents recognize and appreciate the need for schools to prepare their students to use the complex technologies and develop competencies that play an increasing role in career fields.
- Lowering the technology gap is crucial for preparing students who do not have Internet access at home. This mobile learning is a cost-effective way to help students avoid being left behind in their understanding and use of technology.

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### Student Benefits gained from mobile learning

- Anytime, virtually anywhere access to online learning tools and materials
- Bridges technology gaps
- Preparation for technology use in the workplace
- Easier access to education for students who have distance and other barriers
- Help improve student engagement
- Interaction opportunities
- One place to access and store information
- Integrating classroom and experiential learning
- Accommodates different learning styles

### Teacher Benefits gained from mobile learning

- Different ways to teach
- Effective communication with colleagues, students and parents
- Easier course management, quick assessment
- Greater flexibility with digital content
- Higher student engagement
- Better adaptability to accommodate individual student needs
- Simpler, convenient access to applications for teaching learning management and school administration.

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### Background Information

#### *Pilot Project*

St. Thomas Aquinas Middle School (STA) completed piloted a “Student Owned Device” project which saw student bring their personally owned devices into the classroom.

#### *Report and Recommendations to the Board of Trustee*

In January 2011, the STA Pilot Project Report with recommendations was presented to the Board of Trustees. The report along with the initial PowerPoint presentation to the Board of Trustees in 2009 are found in the Division Share in a folder called Student Owned Devices Pilot.

The following recommendation was made to the Board and it was accepted.

“That the Board approve the use of student-owned devices in Red Deer Catholic Regional Schools wireless network if schools (Grade 6 and above) follow the same steps and procedures that occurred at St. Thomas Aquinas Middle School.”

The steps and procedures are as follows:

- a. Staff receive Professional Development (PD)
- b. Digital Citizenship training be given to students
- c. There must be equitable access to devices. This means that a school must purchase devices to loan to students who may not have their own device.
- d. Technologies used are focused on curricular outcomes and not used as a tool for gaming.



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### *Actions Taken*

In response to the STA Pilot and the Board Decision, proactive measures were taken to educate teachers and Division staff for the implementation of Student Owned Devices in our schools. The following actions were taken:

#### **1. 3D 2010-2012 Action Research project**

3D refers to digital learning, digital teaching and the digital classroom. This one-to-one learning initiative is an opportunity for Red Deer Catholic Regional Schools to conduct action research on preparing students and educators to becoming contributing members to an ever increasing technological and global society in an anytime, anywhere learning environment.

The focus is to improve engagement and achievement for all students by bridging the digital divide and enhancing instruction.

The initiative provides opportunity to explore various mobile devices, such as a class set of net books, iPods, iPads, Livescribe Smart pens or flip cameras. Each of these technologies will be a separate project

Teachers are invited to participate in a 10-week collaborative one-to-one mobile technology project in a subject of their choice that optimized the use of Division and school purchased software and hardware.

Outcomes:

- Provide professional development for adapting instruction that optimizes the benefits of a student one-to-one technology environment;
- Increase students' achievement, engagement and ability to learn to meet the demands of the world they are entering;
- Create and support equitable opportunities for student learning through the use of technology as an extension of the classroom;
- Collect student and teacher data on the impact of the project. To learn more about what was completed last year please visit - <http://rdcrd3dproject.wikispaces.com/>

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### 2. The Digital Citizenship Team

The Digital Citizenship Team was created to address the following needs:

- Professional development for teachers
- Professional development for parents
- Resources
- Lessons for K – 12
- Collective place for our division on Digital Citizenship so a wiki was created <http://digitalcitizenrdcrd.wikispaces.com/>



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### Administrator Tool Kit

This is not a checklist or a mandate but rather it is a reference document for you to consider when developing your school's Student-Owned Device strategy. These considerations can to light as the STA pilot and the 3D project evolved. The IT department was also consulted throughout and assisted in many areas.

#### *Vision*

- 1) Do you have a vision of what student learning would look like if all students had access to a device? What would your school look like?

#### *Professional Development*

- 2) We cannot simply keep doing the same thing with new devices. Make preparations for professional development. Even mobile-learning experts admit that educational applications for such technologies are evolving so rapidly that just keeping track of them all, let alone learning to use them, can be difficult. Schools that encourage teachers to use mobile technologies for instruction should also be prepared to support them on how to best use those technologies. Philosophically, has the teacher's instruction changed?
- 3) Take time to ponder these questions: What PD has been offered to move teachers to examine their pedagogy? What is the evidence that teacher practices have changed since the beginning of the PD? Do you have a plan for ongoing PD? What does teaching look like in a device and digital rich school? Does teaching and learning look the same? Is your professional development on-going?
- 4) How are teachers engaging students with the technology?
- 5) What do assessment practices look like when using technology? How do you evaluate digital work?



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- 6) How are teachers using the devices? Are the devices being used for searches (lowest level of Digital Blooms) or are they using them to produce evidence of student learning. Do all the student devices have that capability? If not, how are you ensuring that students have access to a device that will allow them to demonstrate their learning?
- 7) How are students submitting their completed work if it is digital content?
- 8) How do you manage many different devices, software and apps in a classroom?
- 9) What are the best Web 2.0 tools that teachers should be knowledgeable about to use with their students? <http://prezi.com/efnxv2pdxwhr/20-cool-tools-for-teachers-that-take-3-mins-to-learn/>

### *Student Learning and Assessment*

- 10) Are you monitoring student learning and achievement? What do the devices add to learning?
- 11) Have you considered e-portfolios for students and staff to show their personal learning using the technology?
- 12) Are teachers differentiating their instruction to accommodate all learners? How do you assess differentiated assignments?
- 13) Are teachers aware of the amazing tools available for inclusive education and how they can be utilized with all students?

### *Equitability*

- 14) When we talk about equitability are we talking that 100% of the students have a device in their hand? Can we expect students to share? Is this equitable access? What if the student uses another student's device and it drops and breaks it? For those that cannot afford the devices are they being digitally excluded and thus disadvantaged? How are we going to distribute devices to those who do not have them to ensure the child's integrity is maintained? What is fair?
- 15) We need to define what equitable access is as a division. We need a common understanding. How do we honor and value those who cannot afford the devices?

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- 16) Do you have extra devices in the building for those students who do not have devices, forgot their device or the device is not working properly? Schools need to consider devices other than their laptops.

### *Educating parents*

- 17) Have you educated your parents? Are parents aware that we do NOT service these devices?
- 18) How are you communicating with stakeholders what you are doing and learning? Celebrate successes!!
- 19) Do we need an acceptable use agreement again to address student owned devices?

### *Management*

- 20) How is your school cellular phone policy? Does it need to be updated?
- 21) What tools do student owned devices need to have installed to make them useful for students and teachers?
- 22) How many devices are in each classroom? Have parents given permission for their students to use them?
- 23) What kind of device do the students own and what is the value of the device? How can they use them? Some technology has limitations – do you have standards that you hope students would have?
- 24) Are the students aware that they must use the student wireless and NOT 3G or 4G? If students have 3G or 4G devices do their parents have data plans? Do teachers know how to monitor the 3G or 4G usage?
- 25) How are you dealing with the student owned devices at break time? How are you monitoring what they are accessing?
- 26) Can the wireless access point handle the 10, 20, or 30 devices at one time? Has there been a check prior to teachers using the devices?
- 27) Have you considered how these devices are going to be managed? Are they on the desk so everyone can see? Are the texting features on or off? What are the consequences if the device is not used appropriately? Do we have the right to take a device that is owned by the student and has personal information on it?

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- 28) Battery charging – where and how are you going to manage that aspect of mobile use.
- 29) What about wear and tear, or accidental damage of devices during learning?
- 30) Have you considered how to go with less paper or paperless?
- 31) What percentage of devices brought to school require active virus/malware protection? How do you gauge that?
- 32) Currently printing is not allowed on stand-alone devices because of security. Have you considered alternatives?
- 33) What standard apps will work on ALL devices, such as iPads and Android devices?
- 34) Is cloud computing and shared storage a solution that works across all devices?
- 35) How do you manage many different devices, software and apps in a classroom?
- 36) What about maintaining consistency from staff on how to manage/monitor student-owned devices? Will their use contradict existing school/division policies and will those policies need to be amended? How will you go about amending those policies?
- 37) Will students be expected to have their device on them at all times or will students be provided the opportunity to retrieve them from their locker as needed?

### *Safety*

- 38) We have a limited number of Websense licenses based on IP addresses in use per day. If students bring in their own devices, there is a need to increase the number of licenses at a considerable cost. Do we continue to have Websense or do we look at less costly alternatives? Do we consider not having Websense? How are you going to deal with theft, cyber bullying during school time?
- 39) IT needs adequate lead time to ensure sufficient licenses are in place.

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### *Technology*

- 40) Are teachers able to trouble shoot both Android and Apple devices?  
Some staff may not have owned an Apple product and are unsure how to trouble shoot.
- 41) Have you had conversations with the IT representative at your school about what you need from them to help support you with your school moving forward?
- 42) Do you have a knowledgeable Tech Coach that can provide support and PD? Does your tech coach have relief time to support teachers?



### Support Materials for Professional Development

The following materials are available to schools for developing a PD plan:

- Tech Coach Wiki has professional development and materials you can use to support PD in your school.  
<http://rdcrdtechcoach.wikispaces.com/>
- 3D Project wiki is a great resource for preparing teachers for student owned devices. Day 1 is a full day session with video, handouts and agenda. Many great discussions have stemmed from 3D project and great learning has occurred to prepare us for our journey with Student Owned Devices. The 3D wiki has many great resources.  
<http://rdcrd3dproject.wikispaces.com/>
- Digital Bloom's PD session from the Learning Coaches and Administrators' Meeting.  
<http://learningcoaches.wikispaces.com/Digital+Bloom%27s+PD+session>
- Websites to Engage, Motivate, Empower and Differentiate  
<http://rdcrdtechcoach.wikispaces.com/Websites+to+Engage%2C+Motivate%2C+Empower+and+Differentiate>
- Red Deer Catholic apps wiki  
<http://ipadappsrdcrd.wikispaces.com/>

The Digital Citizenship wiki was created as a “one-stop shopping” collaborative space for teachers, administrators and parents.

<http://digitalcitizenrdcrd.wikispaces.com/>

This wiki includes:

- Professional development materials for teachers for embedded PD
- Digital Citizenship Scenario PD
- Developing Ethical Direction
- Jeopardy Digital Citizenship game
- Professional development materials for parents sessions
- Lessons for students – Division 1, 2, 3, 4
- Other resources for teachers, parents and administrators
- Curriculum correlations
- Cyber bullying
- Catholic Church and Digital Citizenship

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### Action Items

- A. Ongoing professional development for staff
- B. Parent communication of your intention
- C. Student Digital Citizenship Training
- D. Equitable access
- E. School policies
- F. IT department conversations

*Note:*

*This document was created after consultation with Joe De Almeida, Ryan Birch, Ryan Ledene and Nicole Zimmerman. The collective wisdom is much appreciated.*